

CLAIMS

What is claimed is:

1. An ultrasound coating for enhancing ultrasonic visualization of a medical device, comprising
an adhesion layer adhering to a surface of the medical device; and
a contrast agent layer overlaying the adhesion layer, the contrast agent layer comprising ultrasound microbubbles.
2. The ultrasound coating of claim 1, wherein the microbubbles vibrate in response to an incident ultrasound wave to generate an harmonic vibration.
3. The ultrasound coating of claim 1, wherein the microbubbles vibrate in response to an incident ultrasound wave to generate a non-harmonic vibration.
4. The ultrasound coating of claim 1, wherein the microbubbles vibrate in response to an incident ultrasound wave to generate both harmonic and non-harmonic vibrations.
5. The ultrasound coating of claim 1, wherein the microbubbles vibrate in response to an incident ultrasound wave to generate a sub-harmonic vibration.
6. The ultrasound coating of claim 1, wherein the adhesion layer comprises a pressure sensitive adhesive.
7. The ultrasound coating of claim 1, wherein the adhesion layer comprises silicone.
8. The ultrasound coating of claim 1, wherein the adhesion layer comprises polymer.
9. The ultrasound coating of claim 1, wherein the adhesion layer comprises hydrogel.
10. The ultrasound coating of claim 1, wherein the adhesion layer comprises DOPA (dihydroxyphenylalanine).
11. The ultrasound coating of claim 1, further comprising a third layer overlaying the contrast agent layer.

12. The ultrasound coating of claim 11, wherein the third layer comprises polymer or hydrogel.
13. The ultrasound coating of claim 12, wherein the third layer comprises therapeutic agents.
14. An ultrasound coating for enhancing ultrasonic visualization of a medical device, comprising:
an adhesion layer adhering to the surface of the medical device; and
ultrasound microbubbles in the adhesion layer.
15. The ultrasound coating of claim 14, wherein the microbubbles vibrate in response to an incident ultrasound wave to generate a harmonic vibration.
16. The ultrasound coating of claim 14, wherein the microbubbles vibrate in response to an incident ultrasound wave to generate a non-harmonic vibration.
17. The ultrasound coating of claim 14, wherein the microbubbles vibrate in response to an incident ultrasound wave to generate both harmonic and non-harmonic vibrations.
18. The ultrasound coating of claim 14, wherein the microbubbles vibrate in response to an incident ultrasound wave to generate a sub-harmonic vibration.
19. The ultrasound coating of claim 14, wherein the adhesion layer comprises a pressure sensitive adhesive.
20. The ultrasound coating of claim 14, wherein the adhesion layer comprises silicone.
21. The ultrasound coating of claim 14, wherein the adhesion layer comprises polymer.
22. The ultrasound coating of claim 14, wherein the adhesion layer comprises hydrogel.

23. The ultrasound coating of claim 14, wherein the adhesion layer comprises DOPA (dihydroxyphenylalanine).

24. The ultrasound coating of claim 14, further comprising therapeutic agents in the adhesion layer.

25. A medical device adapted to be inserted into a patient's body, the medical device having at least a portion coated by the ultrasound coating of claim 1.

26. A medical device adapted to be inserted into a patient's body, the medical device having at least a portion coated by the ultrasound coating of claim 13.

27. The medical device of claim 25 wherein the medical device is a stent.

28. The medical device of claim 25 wherein the medical device is a catheter.

29. The medical device of claim 25 wherein the medical device is a prosthesis.

30. The medical device of claim 26 wherein the medical device is a stent.

31. The medical device of claim 26 wherein the medical device is a catheter.

32. The medical device of claim 26 wherein the medical device is a prosthesis.